REMARKS

Initially, Applicant notes that the amendments and remarks made by this paper are consistent with those presented to the Examiner by telephone.

By this paper, claims 1, 10, and 22 have been amended and no claims have been added or canceled, such that claims 1-23 remain pending, of which claims 1, 10 and 22 are the only independent claims at issue.[1]

The Office Action, mailed September 03, 2008, considered and rejected claims 1-23. Claims 1-23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Collins (U.S. Publ. No. 2002/0029285) in view of Reynolds (U.S. Patent No. 5,627,964).[2]

The currently pending claims are directed to permitting a computing system to operate in a recovery mode while still allowing the computer to reliably receive normal messages. For instance, claim 1 recites a method for permitting the computing system to operate in recovery mode while ensuring reliable message processing for messages received during the recovery mode operations in which at least one instance governing a transaction is operating in a recovery mode. In the method, initially, the computing system engages in multiple concurrent transactions with at least one client computing system, with each of the multiple transactions having an associated instance of an application and each instance having an associated mode distinct from the mode of the other instances. A message corresponding to a particular message from among the multiple transactions is received, wherein the message is a normal message suitable for normal mode operations with respect to the particular message transaction and an instance of an application governing the particular message transaction is in a recovery mode rather than a normal mode. Upon receiving the message, it is determined from state information corresponding to the particular message transaction that the instance of the application governing the particular message transaction is in the recovery mode rather than the normal mode. Then, it is determined that the received message is a normal message suitable for normal mode operations with respect to the particular message transaction, wherein the received message cannot be processed by the instance governing the particular message transaction until the instance

[1] Support for the claim amendments is found on at least pp. 10, 12, and 14 of the Application as originally filed.

[2] Although the prior art status of the cited art is not being challenged at this time, Applicant reserves the right to challenge the prior art status of the cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

governing the particular message transaction is in the normal mode. The received message is then placed into a persistent queue associated with the instance governing the particular transaction for later processing when the instance governing the particular transaction is in the normal mode rather than the recovery mode. Finally, the mode operation for the instance governing the particular transaction is completed.

As noted above, each of the claims were rejected in view of Collins and Reynolds. In general, Collins is directed to adapting graphical data processing activities to changing network conditions in a distributed computing system. The apparently most relevant portion of Collins discloses a recovery mode in which in response to receiving a command related to an uncached bitmap, a client agent reads an incoming protocol stream but does not process it until the bitmap is received. Instead, the client agent builds a queue for received commands from the server and processes the queue once the bitmap is received. Reynolds is directed to the fail safe bootstrapping of a computer system and discloses checking flags to determine if a previous normal mode startup failed, and if so, starting in a fail-safe mode.

Applicant respectfully submits that while Collins relates to a recovery mode and the receipt of commands in such a mode, and Reynolds discloses checking a flag to determine a mode, the combination fails to teach or reasonably support all of the claim elements of the current claims, particularly in the manner recited in the claim as a whole. For example, the current claims are directed to message transactions, while Collins describes a protocol stream and Reynolds discloses flags related to an entire computer system rather than the state information, queue, and mode all with respect to a particular message transaction. In view of the failure of Collins and Reynolds to describe message transactions as recited in combination with the remaining claim elements, Applicant respectfully submits that for at least this reason the current claims are allowable over the cited art.

A message transaction is an exchange of messages following a particular message exchange pattern with a particular client system. As recited in the claims, an instance governs each transaction following the particular message exchange pattern. When there is a failure in some part of the system, there will be likely be at least one instance that did not complete its message exchange pattern and that instance will enter into the recovery mode. Other instances that completed their transaction or started a new transaction will operate in a normal mode.

After an instance completes its recovery mode, it can then enter into the normal mode and process any messages that were stored.

The message transactions of the current claims do not properly correspond to the protocol stream of the cited art. This is at least partially apparent from the Office Action where it states, "incoming protocol stream reads on a message". If the Office Action is asserting that the protocol stream is a message, then there is no corresponding transaction associated with the message that is described in the cited art. In particular, there is no message exchange pattern that is being followed, as the client application only receives data and fails to communicate with the server unless there is a failure. This is contrasted with the pending claims, where the particular client actively communicates with the computer system in a defined exchange pattern.

Without disclosing transactions, it is not possible for the cited art to teach state information, a queue, or a mode with respect to a particular transaction, as is recited in the pending claims. The current claims allow for multiple instances and transactions to be running concurrently in possible different states. For each transaction there is a distinct instance governing that transaction. The state information for one transaction is not the same as the state information for another transaction. When a message is received, the present claims recite a system which accesses state information of the transaction associated with the message to determine if the relevant instance is in recovery mode. The state information is associated to that particular transaction because a different transaction may be in a different mode.

The Office Action introduces Reynolds to compensate for Collins failure to disclose determining from state information corresponding to a particular message transaction that the instance governing the particular message transaction is in the recovery mode. While Column 6, lines 28-32 disclose a checking a flag to determine which mode to start up in, Applicant respectfully submits that the disclosure fails to fully teach the claim element. Reynolds is disclosing a computer processor checking a flag and is unrelated to a transaction. The claimed embodiments are checking the state corresponding to a particular transaction, not a computer system as a whole. If the disclosure of Reynolds were applied to Collins, the combination would merely provide that the entire system would enter into a recovery state, whereas in the claimed embodiment, only the instance corresponding to a particular transaction would enter the recovery state. The other instances continue to function normally if they are in a normal state. Because

neither Collins or Reynolds disclose multiple concurrent instances, they are unable to teach or suggest that

Independent claim 22 contains further elements also not found in the cited art, including the processing of a second message associated with a second transaction. The Office Action states that claim 22 is rejected using the same rationale as claim 1, however, claim 22 contains additional elements that are not addressed in the Office Action. As previously presented to the Examiner, the second message of claim 22 is received during the processing of the particular transaction and is a normal message. Because the second transaction is in a normal mode, the second message is processed normally. This independent claim highlights that multiple transactions can run concurrently and that the transactions are not necessarily in the same mode. Such features, as recited in combination with the other claims elements are not found in the cited art of Collins.

Dependent claims 2 and 14 contain still additional elements not found in the cited art. For example, they recite that the state information related to the transactions are loaded from persistent media in response to the act of receiving the message. By having the state information in persistent media, the computer system maintains the state even after a power loss. The Office Actions cites Reynolds as teaching this limitation. While Reynolds discloses checking a flag at boot time to determine a system state, Reynolds fails to disclose that this is done in response to receiving the message. Instead, the flag is checked as part of the normal boot process of the computer.

In view of the foregoing, Applicant respectfully submits that the other rejections to the claims are now moot and do not, therefore, need to be addressed individually at this time. It will be appreciated, however, that this should not be construed as Applicant acquiescing to any of the purported teachings or assertions made in the last action regarding the cited art or the pending application, including any official notice. Instead, Applicant reserves the right to challenge any of the purported teachings or assertions made in the last action at any appropriate time in the future, should the need arise. Furthermore, to the extent that the Examiner has relied on any Official Notice, explicitly or implicitly, Applicant specifically requests that the Examiner provide references supporting the teachings officially noticed, as well as the required motivation or suggestion to combine the relied upon notice with the other art of record.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at (801) 533-9800.

Dated this 2nd day of December, 2008.

Respectfully submitted,

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